

use the invention" because "Applicants fail to disclose when and how tools are integrated for modeling data within the relational database". Claims 1 and 13 have been amended. Claims 1 and 13 include the recitation of "using tools to model the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model". The specification describes, for example, at page 6, lines 11-15 that modeling of the data within the database is accomplished using statistical software tools and non statistical tools. Additionally, the specification describes at page 7, lines 16-17 that "models used are grouped under two general categories, namely marketing and risk". Applicants respectfully submit that the specification, including the Figures, would enable one skilled in the art to make and/or use the invention as described in Claims 1 and 13. Accordingly, Applicants respectfully request that the rejection of Claims 1 and 13 under Section 112, first paragraph, be withdrawn.

With respect to Claims 6 and 18, the Office Action provides that "Applicants have not disclosed what type of algorithm may be used for the claimed invention". The specification describes, for example, at page 6, lines 14-15 that a "typical modeling output is an algorithm that will be used in scoring". Applicants respectfully submit that the specification does not have to describe the "type of algorithm" for one of ordinary skill in the art to make and/or use the invention as described in the present patent application. Accordingly, Applicants respectfully request that the rejection of Claims 6 and 18 under Section 112, first paragraph, be withdrawn.

With respect to Claims 7-8 and 19-20, the Office Action provides that "Applicants fail to disclose what type of individual accounts or accounts...will be used for the claimed invention". The specification describes, for example, at page 6, lines 16-20 that "Results from modeling 104 are used in scoring 106 to score accounts and assign the accounts numerical values". Additionally, the specification describes at page 7, lines 15-16 that "...scores associated with each customer, the scores can be combined to arrive at relevant customer metrics". Thus, the specification describes the accounts to include a customer. Applicants respectfully submit that the specification describes the accounts such that one of ordinary skill in the art could make and/or use the invention as described in the present patent application. Accordingly, Applicants respectfully request that the rejection of Claims 7-8 and 19-20 under Section 112, first paragraph, be withdrawn.

With respect to Claims 8 and 20, the Office Action provides that “Applicants have not specify the classes, deciles, and clusters being used for the claimed invention”. Claims 8 and 20 have been amended. The specification describes, for example, at page 6, lines 16-20 that “...Non numerical scoring may include assignment of accounts to clusters, for example (Bargain Hunters, Young Achievers), deciles (top 10 percent) or classes (A, B, C, D).” Applicants respectfully submit that the specification, including the Figures, would enable one skilled in the art to make and/or use the invention as described in Claims 8 and 20. Accordingly, Applicants respectfully request that the rejection of Claims 7-8 and 19-20 under Section 112, first paragraph, be withdrawn.

Claims 2-12 depend, directly or indirectly, from independent Claim 1. Applicants submit that independent Claim 1 satisfies Section 112, first paragraph, and is submitted in condition for allowance. When the recitations of Claims 2-12 are considered in combination with the recitations of Claims 1, Applicants submit that dependent Claims 2-12 likewise are patentable.

Claims 14-24 depend, directly or indirectly, from independent Claim 13. Applicants submit that independent Claim 13 satisfies Section 112, first paragraph, and is submitted in condition for allowance. When the recitations of Claims 14-24 are considered in combination with the recitations of Claims 13, Applicants submit that dependent Claims 14-24 likewise are patentable.

For the reasons set forth above, Applicants respectfully request that the rejection of Claims 1-24 under Section 112, first paragraph, be withdrawn.

The rejection of Claims 3-6, 15-17, and 19-20 under 35 U.S.C. § 112, second paragraph, is respectfully traversed.

Applicants respectfully submit that Claims 3-6, 15-17, and 19-20 satisfy the requirements of Section 112, second paragraph. More specifically, Applicants respectfully submit that Claims 3-6, 15-17, and 19-20 are definite and particularly point out and distinctly claim the subject matter of the invention. Accordingly, Applicants respectfully request that the rejection of Claims 3-6, 15-17, and 19-20 under Section 112, second paragraph, be withdrawn.

With respect to Claims 3-4 and 15-16, the Office Action suggests that “Applicants fail to distinguish the benefits and timing of using either statistical or non-statistical tools to model the relational database”. The specification describes, for example, at page 6, lines 11-15 that modeling of the data within the database is accomplished using statistical software tools and non statistical tools. Applicants respectfully submit that Claims 3-4 and 15-16 are definite and particularly point out and distinctly claim the subject matter of the invention. Applicants further submit that the specification does not have to “distinguish the benefits and timing of using either statistical or non-statistical tools to model the relational database” to distinctly claim the subject matter of the invention. Accordingly, Applicants respectfully request that the rejection of Claims 3-4 and 15-16 under Section 112, second paragraph, be withdrawn.

With respect to Claim 6, the Office Action provides that “Applicants fail to disclose the links between ‘using tools to model the relational database’ and ‘the step of generating an algorithm’”. The specification describes, for example, at page 6, lines 11-15 that “Modeling 104 of the data within database is accomplished in a number of ways including statistical software tools and non statistical tools...typical modeling output is an algorithm that will be used in scoring 106”. Applicants respectfully submit that Claim 6 is definite and particularly points out and distinctly claims the subject matter of the invention. Accordingly, Applicants respectfully request that the rejection of Claim 6 under Section 112, second paragraph, be withdrawn.

With respect to Claims 7-8 and 19-20, the specification describes, for example, at page 6, lines 16-20 that “Results from modeling 104 are used in scoring 106 to score accounts and assign the accounts numerical values”. Applicants respectfully submit that Claims 7-8 and 19-20 are definite and particularly point out and distinctly claim the subject matter of the invention. Furthermore, Claims 8 and 20 have been amended. Accordingly, Applicants respectfully request that the rejection of Claims 7-8 and 19-20 under Section 112, second paragraph, be withdrawn.

Claim 5 depends from independent Claim 1. Applicants submit that independent Claim 1 satisfies Section 112, second paragraph, and is submitted to be in condition for allowance. When the recitations of Claim 5 are considered in combination with the recitations of Claims 1, Applicants submit that dependent Claim 5 likewise is patentable.

Claim 17 depends from independent Claim 13. Applicants submit that independent Claim 13 satisfies Section 112, second paragraph, and is submitted in condition for allowance. When the recitations of Claim 17 are considered in combination with the recitations of Claims 13, Applicants submit that dependent Claim 17 likewise is patentable.

For the reasons set forth above, Applicants respectfully request that the rejection of Claims 3-6, 15-17, and 19-20 under Section 112, second paragraph, be withdrawn.

The rejection of Claims 1-24 under 35 U.S.C. § 102(e) as being anticipated by Pasumansky et al. (U.S. Patent No. 6,477,536) (Pasumansky) is respectfully traversed.

Applicants respectfully submit that Pasumansky does not describe nor suggest the claimed invention. As discussed below, at least one of the differences between Pasumansky and the present invention is that Pasumansky neither describes nor suggests a method for providing to an end user multi-dimensional customer profiles that allow the end user to effectively manage customer targeting wherein the method includes using tools to model a relational database to determine at least one model for a customer including at least one of a marketing model and a risk model. In fact, Pasumansky does not describe or teach using tools to model a relational database, nor does it describe or teach determining marketing models or risk models.

Pasumansky describes systems and methods for creating and maintaining virtual cubes. A virtual cube is a logical representation of a subset of dimensions and measures of at least one physical cube maintained by an online analytical processing (OLAP) server. Metadata defines the mappings from the dimensions and measures of the virtual cube to the dimensions and measures of the physical cube. The virtual cube does not contain any cell data itself, rather the mappings are used to access cell data maintained in the physical cubes contributing dimensions and measures to the virtual cube. Client applications can manipulate the virtual cube as if it were a physical cube.

Claim 1 recites a method for providing to an end user multi-dimensional customer profiles that allow the end user to effectively manage customer targeting, wherein the method includes “compiling data from multiple sources to create a relational database...using tools to

model the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model...scoring the modeled database...integrating scores into a multi-dimensional structure...and providing access to end users to the multi-dimensional structure."

Pasumansky neither describes nor suggests a method for providing to an end user multi-dimensional customer profiles that allow the end user to effectively manage customer targeting, wherein the method includes compiling data from multiple sources to create a relational database, using tools to model the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model, scoring the modeled database, integrating scores into a multi-dimensional structure, and providing access to end users to the multi-dimensional structure.

More specifically, Pasumansky neither describes nor suggests a method that includes using tools to model a relational database to determine at least one model for a customer that includes at least one of a marketing model and a risk model. Rather, Pasumansky describes systems and methods for creating and maintaining virtual cubes.

Although page 6 of the Office Action suggests that Pasumansky describes at col. 8, lines 23-32 "using tools to model data within the relational database", Pasumansky does not describe nor suggest using tools to model data. Rather, Pasumansky at col. 8, lines 23-32 describes one embodiment of the invention that includes an OLAP server (260) that maintains the cell values for cubes (230) in cube data (240), and another embodiment of the invention where OLAP server (260) interfaces with a relational database system that maintains cube data (240). Maintaining cube data as described in Pasumansky does not describe nor teach using tools to model data within a relational database. Pasumansky does not describe nor teach using tools to model a relational database to determine at least one model for a customer that includes at least one of a marketing model and a risk model. Accordingly, Applicants respectfully submit that Claim 1 is patentable over Pasumansky.

For at least the reasons set forth above, Claim 1 is submitted to be patentable over Pasumansky.

Claims 2-12 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-12 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-12 likewise are patentable over Pasumansky.

Claim 13 recites a system configured to provide to an end user multi-dimensional customer profiles allowing the end user to effectively manage customer targeting, wherein the system includes “at least one computer...a server configured to compile data from multiple sources to create a relational database, use tools to model data within the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model, score the modeled data, integrate the scores into a multi-dimensional structure and provide access to the multi-dimensional structure...and a network connecting said computer to said server.”

Pasumansky neither describes nor suggests a system configured to provide to an end user multi-dimensional customer profiles that allows the end user to effectively manage customer targeting, wherein the system includes at least one computer, a server that is configured to compile data from multiple sources to create a relational database, use tools to model data within the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model, score the modeled data, integrate the scores into a multi-dimensional structure, and provide access to the multi-dimensional structure, and a network connecting the computer to the server.

More specifically, Pasumansky neither describes nor suggests a system that includes a server that is configured to use tools to model data within the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model. Rather, Pasumansky describes systems and methods for creating and maintaining virtual cubes.

Although page 6 of the Office Action suggests that Pasumansky describes at col. 8, lines 23-32 “using tools to model data within the relational database”, Pasumansky does not describe

nor suggest a server that is configured to use tools to model data. Rather, Pasumansky at col. 8, lines 23-32 describes one embodiment of the invention that includes an OLAP server (260) that maintains the cell values for cubes (230) in cube data (240), and another embodiment of the invention where OLAP server (260) interfaces with a relational database system that maintains cube data (240). Maintaining cube data as described in Pasumansky does not describe nor teach using tools to model data within a relational database. Pasumansky does not describe nor teach a server that is configured to use tools to model data within the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model. Accordingly, Applicants respectfully submit that Claim 13 is patentable over Pasumansky.

For at least the reasons set forth above, Claim 13 is submitted to be patentable over Pasumansky.

Claims 14-24 depend, directly or indirectly, from independent Claim 13. When the recitations of Claims 14-24 are considered in combination with the recitations of Claim 13, Applicants submit that dependent Claims 14-24 likewise are patentable over Pasumansky.

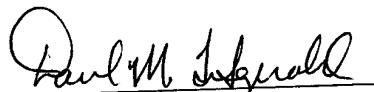
For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-24 be withdrawn.

Newly added Claims 25-26 depend, directly or indirectly, from independent Claim 1 which is submitted in condition for allowance and patentable. When the recitations of Claims 25-26 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 25-26 likewise are patentable over the cited art.

Newly added Claims 27-28 depend, directly or indirectly, from independent Claim 13 which is submitted in condition for allowance and patentable. When the recitations of Claims 27-28 are considered in combination with the recitations of Claim 13, Applicants submit that dependent Claims 27-28 likewise are patentable over the cited art.

In view of the foregoing amendments and remarks, all the claims now active in the application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



Daniel M. Fitzgerald  
Registration No. 38,880  
ARMSTRONG TEASDALE LLP  
One Metropolitan Square, Suite 2600  
St. Louis, Missouri 63102-2740  
(314) 621-5070



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Samra et al.

Serial No.: 09/751,859

Filed: December 29, 1999

For: METHODS AND SYSTEMS  
FOR ACCESSING MULTI-  
DIMENSIONAL CUSTOMER  
DATA

: Art Unit: 2171

: Examiner: Te Y. Chen

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Technology Center 2100

**SUBMISSION OF MARKED UP CLAIMS**

Hon. Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Submitted herewith are Marked Up Claims in accordance with 37 C.F.R. 1.121(c)(1)(ii).

**IN THE CLAIMS**

1. (once amended) A method for providing to an end user, multi-dimensional customer profiles, allowing the end user to effectively manage customer targeting, said method comprising the steps of:

compiling data from multiple sources to create a relational database;

using tools to model the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model;

scoring the modeled database;

integrating scores into a multi-dimensional structure; and

providing access to end users to the multi-dimensional structure.

8. (once amended) A method according to Claim 7 wherein said step of scoring individual accounts and assigning the accounts [a non numerical value] further comprises the step of assigning accounts having an assigned non-numerical value to at least one of classes, deciles and clusters.

13. (once amended) A system configured to provide to an end user, multi-dimensional customer profiles, allowing the end user to effectively manage customer targeting, said system comprising:

at least one computer;

a server configured to compile data from multiple sources to create a relational database, [using] use tools to model data within the relational database to determine at least one model for a customer including at least one of a marketing model and a risk model, score the modeled data, integrate the scores into a multi-dimensional structure and provide access to the multi-dimensional structure; and

a network connecting said computer to said server.

20. (once amended) A system according to Claim 19 wherein said server configured to assign accounts having an assigned non-numerical value to at least one of classes, deciles and clusters.

PLEASE ADD THE FOLLOWING NEW CLAIMS:

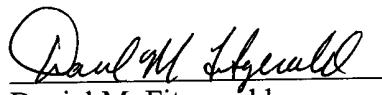
25. (newly added) A method according to Claim 1 wherein said step using tools to model the relational database further comprises the step of using tools to determine at least one marketing model including at least one of a net present value/profitability model, a prospect pool model, a net conversion model, an attrition model, a response model, a revolver model, a balance transfer model, and a reactivation model.

26. (newly added) A method according to Claim 1 wherein said step using tools to model the relational database further comprises the step of using tools to determine at least one risk model including at least one of a payment behavior prediction model, a delinquency model, a bad debt model, a fraud detection model, a bankruptcy model, and a hit and run model.

27. (newly added) A system according to Claim 13 wherein said at least one marketing model includes at least one of a net present value/profitability model, a prospect pool model, a net conversion model, an attrition model, a response model, a revolver model, a balance transfer model, and a reactivation model.

28. (newly added) A system according to Claim 13 wherein said at least one risk model includes at least one of a payment behavior prediction model, a delinquency model, a bad debt model, a fraud detection model, a bankruptcy model, and a hit and run model.

Respectfully Submitted,

  
\_\_\_\_\_  
Daniel M. Fitzgerald  
Registration No. 38,880  
ARMSTRONG TEASDALE LLP  
One Metropolitan Square, Suite 2600  
St. Louis, Missouri 63102-2740  
(314) 621-5070